

Abstract

Effects of clonidine on hemodynamic response to endotracheal intubation and carbon dioxide pneumoperitoneum and scale postoperative shivering in patients undergoing laparoscopic cholecystectomy

Background: There are major concerns about hemodynamic changes and postoperative shivering in patients who undergo laparoscopic cholecystectomy. According to available reports on the favorable effect of clonidine in hemodynamic response of patients and reducing postoperative shivering, this study is intended to use clonidine to reduce hemodynamic adverse effects in patients during endotracheal intubation and carbon dioxide instillation and postoperative shivering in patients who undergo laparoscopic cholecystectomy.

Methods: This triple-blind clinical trial was conducted on patient aged 18 to 70 years who were candidates for laparoscopic cholecystectomy. 60 patients who participated in this study were randomly divided into two groups, each consisting of 30 patients: intervention group (receiving 150 ug oral clonidine) and control group (receiving 100 mg oral vitamin C). Patients of both groups underwent similar general anesthesia and laparoscopic cholecystectomy. Heart rate and blood pressure of patients were measured in different steps and recorded in check lists. Results were coded and analyzed in SPSS software ver. 21 using chi-square test, T-test and variance analysis with repeated measurements.

Results: Results of this study on the effect of clonidine premedication on heart rate and mean blood pressure in patients who underwent laparoscopic cholecystectomy showed that both heart rate and mean blood pressure were lower in clonidine group compared with placebo group, but this difference was not statistically significant and no difference was observed for shivering in the two groups.

Conclusion: Using 150 µg oral clonidine as an inexpensive and economic premedication in patients who undergo laparoscopic cholecystectomy, results in improvement of hemodynamic stability during the operation and its routine use in laparoscopic cholecystectomies is being suggested.

Keywords: Endotracheal intubations, Pneumopri toneum, oral clonidine, laparoscopic chole cystectomy, homodynamic, postoperative shivering.